

# Predictors and Classification of Consumers' Decisions and Attitudes Toward Electric Vehicles

Team members: Ryan Busman, Elaine Kwan, Deb Peters, Nick Watkins

## ***Assumptions for Project 2:***

- Audience:
  - Policymakers
  - Vehicle Manufacturers
  - EV Engineers
  - EV sales and marketing
  - EV consumers/individual consumers
- Definition of an EV care (carandriver.com):
  - **Battery electric vehicles** (BEVs), which run entirely on electricity stored in batteries.
  - **Hybrid electric vehicles** (HEVs), which use a combination of gasoline and electricity to run.
  - **Plug-in hybrid electric vehicles** (PHEVs), which can be plugged in to charge the batteries and use electricity or gasoline to run.
  - **Fuel cell electric vehicles** (FCEVs), which use hydrogen to generate electricity and run.

## ***Approach***

- *Explorations:*
  - Clusters of vehicle consumers distinguished by demographics, environmental and technology attitudes, and EV adoption
  - Demographic, behavioral, and attitudinal predictors of EV adoption
  - Select statistical model with highest accuracy, precision, and sensitivity
- *Possible variables:*
  - *Independent variables:* Demographics, attitudes (toward environment and technology), and lifestyle choices.
  - *Dependent variables:* Purchase of or intent to purchase an EV
- *Sources:*
  - Pew Research Center: Wave 108 of the American Trends Panel: COVID and Climate, Energy and the Environment
    - <https://www.pewresearch.org/american-trends-panel-datasets/>
    - About the data:

- The ATP is Pew Research Center's nationally representative online survey panel. The panel is composed of more than 10,000 adults selected at random from across the entire U.S.
- For the online panel to be truly nationally representative, the share of those who do not use the internet must be represented on the panel somehow. In 2021, the share of non-internet users in the U.S was [estimated](#) to be 7%, and while this is a relatively small group, its members are quite different demographically from those who go online. In its early years, the ATP conducted interviews with non-internet users via paper questionnaires. However, in 2016, the Center switched to providing non-internet households with tablets which they could use to take the surveys online. The Center works with [Ipsos](#), an international market and opinion research organization, to recruit panelists, manage the panel and conduct the surveys.
- We make a promise to our panelists to protect their identity. Several checks and balances are in place to make sure that Pew Research Center remains true to its word. Personal identifying information (PII) such as a panelist's name or county of residence is maintained solely by the core panel administration team and is never made available to the general public. In some cases, additional steps such as data swapping – randomly swapping certain values among a small number of respondents with similar characteristics for sensitive questions – is also used to protect panelists' information.
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